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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,152	06/29/2005	Dario Oldani	267.191	4373
47888 7590 08/29/2007 HEDMAN & COSTIGAN P.C. 1185 AVENUE OF THE AMERICAS NEW YORK, NY 10036				
			EXAMINER BELL, BRUCE F	
			ART UNIT 1745	PAPER NUMBER
			MAIL DATE 08/29/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/541,152

**Applicant(s)**

OLDANI ET AL.

**Examiner**

Bruce F. Bell

**Art Unit**

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/29/05</u> .                                                 | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3, 13-15, 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 13-15 and 22 are vague and indefinite with respect to what the applicants are intending to instantly claim. Are applicants claiming the anode or the anode assembly. It appears to the examiner that the assembly should be instantly claimed since applicant is further limiting these claims by extractable tool features which do not appear to be a part of the anode. Correction and/or clarification are requested.

Claims 19-21 are vague and indefinite with respect to what the electrolysis method is from these instant claims as set forth since it appears that the cell has not been put into operation from the way the instant claims are set forth. Further, there are no process steps set forth showing the sequence of performing the electrolysis in the instant claims as presented.

Claim 22 is further vague and indefinite with respect to what applicants are intending to instantly claim, since there are numerous embodiments portrayed in the drawings attached with this instant invention. If the applicants maintain this claim as set forth, applicants will be issued an election of species requirement and they will be asked

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to pick a specific embodiment to be examined and asked which combination of features of the drawing that they wish to have examined.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 16 and 17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for removal of constraint elements and insertion of elastic forcing elements in the anode, does not reasonably provide enablement for an operated anode of the prior art modified by means of adequate processing. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The instant claims as presented do not reflect applicants instant invention with respect to the instant specification.

#### ***Claim Objections***

5. Claims 10 and 11 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 10 fails to further limit the anode of claim 9 since the external adjustable tool and gear do not appear to be a structural part of the anode. It appears that these features are a part of a mechanism that is attached to the anode for adjustment at a later time. It further appears that this could be a part of an anode assembly but not a part of an anode per

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se. Therefore, since claim 11 depends on claim 10, it has the same deficiency and the claims as set forth, do not further limit the anode structure.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-8, 12, 16, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Klatt et al (5593555).

Klatt et al disclose a chlor-alkali cell having a diaphragm or membrane. See abstract. An electrode structure consists of a main power feed 2, a feed conductor 3 and an active electrode surfaces 4. The feed conductor consists of a metal plate, which is bent into the shape of a U or V and which is connected by a U-shaped folded or bent areas 5 to an active electrode surface by welding. A weld 6 extends parallel to an axis 7 of the main power feed 2. In the area of shanks 8, projecting to form the shape of a U or V, feed conductor 3 is connected by welds to U-shaped or box like active electrode surfaces 4, where welds 9 extend parallel to axis 7 of main power feed 2. Near outer edges, the shanks 8 of feed conductors 3 have detents which serve to retain U-shaped flow guide plates 10 which form a flow channel 16 parallel to axis 7 of the main power feed in the area of the electrode structure 1. The U-shaped flow plates 10 can, after the

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expansion of the electrode structure, be pushed in and locked in place parallel to axis 7 of the main power feed. See col. 2, line 40 – col. 3, line 24 and Figures 1-3.

Klatt et al anticipate the applicants instant invention as shown by way of the disclosure above. Since the recitation in claim 1 directed to the electrocatalytic film is shown to be optional, Klatt et al anticipates the instant claims as set forth. Further since the end caps of Klatt et al are pulled out to expand the electrode, it appears that the edges of the elastic element are externally adjustable. The Klatt et al patent further shows by way of the figures that the elastic element (feed conductor) has fins engaging the connecting sheets (electrode surface). The patent further discloses a flow guide plate that when inserted holds the feed conductor in place. It appears that since the flow guide plate is all the way through the entire electrode assembly, that the forcing elastic element (feed conductor) is adjusted at both the top and bottom and middle as well. With respect to claim 8, the examiner construes the collar to be the flow guide plate 10 in Figure 3 where it encircles the flanges on the feed conductor and the opening of the feed conductor is the top where the guide plate is inserted into the electrode. With respect to claims 16 and 17, it appears that since it can not be ascertained exactly what applicants are attempting to instantly claim, that the prior art of Klatt et al reads on the instant claims as presented and therefore is anticipatory.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klatt et al (5593555) in combination with de Nora et al (4162953).

Klatt et al is as disclosed above in the 35 USC 102(b) rejection above.

Klatt et al does not disclose the elastic element being made of titanium or titanium alloy.

De Nora et al disclose a diaphragm electrolytic cell having dimensionally stable anodes in which the anodes rest freely in the cell and are spring pressed toward the diaphragms by spring loaded transverse arms on the positive current carriers, which in used contact, but are not mechanically connected to, the anodes, the spring pressed electrical contacts between the transverse arms and the anodes are sufficient to carry current to the anodes without substantial ohmic drop through these contacts and permit the anodes to be removed from the cells for recoating and other purposed without destroying any welds or their permanent mechanical connections between the anodes and other portions of the cell. See abstract. The current carriers or risers 9 are provided with at least two transverse arms of titanium welded on the current carrier itself along two opposite sides thereof. The anodes of the cell consist of expanded sheets or mesh of titanium, coated with an electrocatalytic coating . See col. 5, lines 37-44. The current carriers or risers 9 of titanium or titanium coated metal are permanently secured on the bottom of the cell and the base flanges 21 of titanium risers or current carriers 9 are welded to a titanium sheet. Two transverse arms 22 of titanium are welded on each side of each current carrier 9 and at least two vertical contacts 23 of titanium are welded on

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the two transverse arms 22. The transverse arms 22 are further provided with guides 24 for the insertion of suitable spreaders or retention elements. See col. 6, lines 9-23.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the instant invention was made because even though the prior art of Klatt et al does not disclose that the elastic element is made of titanium or titanium alloy, the prior art of de Nora et al shows that it is conventional in the art to use such a material for the anodes in chlor-alkali cells. Therefore, the prior art of Klatt et al in combination with de Nora et al render the applicants instant invention as obvious for the reasons set forth above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB  
August 21, 2007

  
Bruce F. Bell  
Primary Examiner  
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